

REMARKS

The Office Action and the cited and applied references have been carefully reviewed. No claim is allowed. Claims 1-10 presently appear in this application and define patentable subject matter warranting their allowance. Reconsideration and allowance are hereby respectfully solicited.

Claims 1, 2, and 6 have been objected to for encompassing non-elected subject matter, SEQ ID NOs:2 or 33. appropriate correction is made to claims 1, 2, and 6, thereby obviating this objection.

Claim 2 has been rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The examiner states that the fragments having SEQ ID NOs:3-23 are fragments of SEQ ID NO:1, and range from 4 to 29 amino acids in size. However, the examiner holds that they represent specific sequence fragments in SEQ ID NO:1, and disclosure of those species does not constitute a disclosure of the generic concept of fragments comprising 4 to 29 contiguous amino acid residues of SEQ ID NO:1, as claimed in claim 2. The examiner indicates that this rejection is a new matter rejection. This rejection is respectfully traversed.

Claim 2 is now amended to recite "4 to 29 contiguous amino acid residues by reducing and alkylating a peptide having

the amino acid sequence of SEQ ID NO:1, and digesting the resulting reduced and alkylated peptide with trypsin or trypsin-pepsin", as supported by the specification at pages 18-19, Example 1-3. Applicants believe that the contiguous amino acid residues as recited in amended claim 2 are supported by the specification as filed in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s) had possession of such contiguous amino acid residues.

Reconsideration and withdrawal of the rejection are therefore respectfully requested.

Claims 1-7 have been rejected under 35 U.S.C. §101 because the examiner states that the claimed invention is directed to non-statutory subject matter. Appropriate correction is made to the claims, thereby obviating this rejection.

Claims 1-9 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. This rejection is obviated by the amendments to the claims. Support for the amendment to claim 6 is found in the paragraph bridging pages 37 and 38 of the present specification, where it is disclosed that "the amino acid sequence of the IL-18 binding protein of human origin shown in SEQ ID NO:1 exhibited about 61% homology with the amino acid sequence aligned in SEQ ID NO:41". SEQ ID NO:41 is the mouse IL-18 binding protein. Applicants state that the disclosure here indicates that IL-18 binding proteins which are closer to human origin than the mouse origin IL-18 binding

protein has a homology of higher than 61% to the amino acid sequence of IL-18 binding protein of human origin (SEQ ID NO:1).

Reconsideration and withdrawal of this rejection are therefore respectfully requested.

Claims 1-9 have been rejected under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for claims limited in scope to an IL-18 binding protein having SEQ ID NO:1, functional fragments thereof, and the DNA encoding SEQ ID NO:1, does not reasonably provide enablement for claims to all IL-18 binding proteins which comprise "a part" of SEQ ID NO:1, small fragments of SEQ ID NO:1 and DNA encoding the same or homologues thereof. This rejection is respectfully traversed.

Claim 1 is now amended to define a purified IL-18 binding protein comprising a functional fragment or the whole of amino acid sequence of SEQ ID NO:1. Claim 2 is dependent from claim 1 and therefore, it is readily understood that the "4 to 29 contiguous amino acid residues" as recited in amended claim 2 naturally possess IL-18 binding ability.

Functional fragments of IL-18-binding protein are useful in various applications. For example, a functional fragment of IL-18 binding protein is labeled with radioactive substance or fluorescent substance and is used in detecting IL-18. That is to say, the labeled functional fragment of IL-18 binding protein is contacted with a sample to bind to IL-18, and then its radioactivity or fluorescence is detected to measure the presence or the quantity of IL-18. Functional fragments of IL-18

binding protein are also used in purifying IL-18. These industrial uses of functional fragments of IL-18 binding protein are readily understood by one of skill in the art from the disclosure of the present specification.

Reconsideration and withdrawal of the rejection are therefore respectfully requested.

Claim 1 and dependent claims 2-9 have been further rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This rejection is respectfully traversed.

The present specification discloses the amino acid sequences of SEQ ID NO:3 to 23 as 21 concrete examples of functional fragments of SEQ ID NO:1. Accordingly, the presently specification provides adequate written description of the presently claimed invention.

Reconsideration and withdrawal of the rejection are therefore respectfully requested.

Claims 5 and 6 have been rejected under 35 U.S.C. §102(b) as being anticipated by Adams et al. for locus AA311795. The examiner states that Adams discloses a polynucleotide comprising nucleotides 35-485 of SEQ ID NO:32 of the present invention with 99.3% sequence identity. This rejection is obviated by applicants' amendment to claim 5.

Reconsideration and withdrawal of the rejection are therefore respectfully requested.

Claims 1-4 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Adams et al. for locus AA311795 as applied to claims 5 and 6 above, and further in view of Sibson et al., WO94/01548. This rejection is respectfully traversed.

Applicants believe that because of the exclusion of Adam's nucleotide sequence from claim 5, it would not have been obvious for one of ordinary skill in the art to arrive at the presently claimed invention because Sibson merely discloses the desirability of generally placing a cDNA sequence into an expression vector and host cell to express the encoded protein.

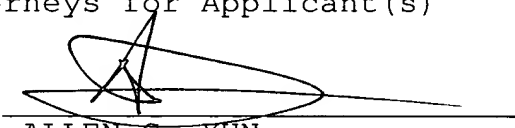
Reconsideration and withdrawal of the rejection are therefore, respectfully requested.

In view of the above, the claims comply with 35 U.S.C. §112 and define patentable subject matter warranting their allowance. Favorable consideration and early allowance are earnestly urged.

Respectfully submitted,

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